

U.S. Patent Application Serial No. **10/523,034**
Response filed January 21, 2009
Reply to OA dated October 17, 2008

REMARKS

Claims 1-4, 6-9, 11 and 13 are pending in this application. No amendment is made in this Response. It is believed that this Response is fully responsive to the Office Action dated **October 17, 2008**.

Claims 4 and 7-9 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. (Office action paragraph no. 1)

The rejection of claims 4 and 7-9 is respectfully traversed, and reconsideration is requested.

The Examiner states that "it is not clear what pores are being referred to."

However, Applicant submits that in claim 4, the term "pore diameter" clearly refers to pores in the flower thinning agent. Moreover, this term is used only in a general **description** of the Dxs parameter, and the nature of the pores is irrelevant to the definition of the parameters in the claim.

Applicant further notes the Examiner's comments in paragraph no. 7 of the Office action, stating that: "it is not clear whether this refers to interparticle or intraparticle pores. Further, there is no antecedent basis for pores" Again, in claim 4, the "pore diameter" is being **defined** in the claim, and it is irrelevant where the pores are. Such a composition will inherently have some pores, and therefore, there is no issue of lack of antecedent basis for this term in claim 4.

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In addition, claims 7-9 do not even recite the word "pore" or "porosity," so the Examiner's comment that "the same problems are present in claims 7-9" would not appear to be correct.

Claims 1-4, 6, 11 and 13 are rejected under 35 U.S.C. §103(a) as obvious over Welshimer et al., U.S. Patent Application Publication 2001/0042494 in view of Wertz et al., U.S. Patent No. 6,936,681. (Office action paragraph no. 3)

The rejection is respectfully traversed, and reconsideration is requested.

In paragraphs no. 3 and 4 of the Office action, the Examiner cites Welsheimer for the disclosure of a granulate material comprising inorganic compounds and a binder that can comprise materials such as amino acids, and the Examiner states that these would inherently meet the BET limitation of the present claims.

The Examiner states that Welshimer "does not teach the claimed particle size," apparently referring to limitation (a) in claim 1. The Examiner cites Wertz as teaching "that the size of the particles can be controlled depending upon the use of the fertilizer and that when the fertilizer is used to fertilize seed that a very small particle size of 10-80 microns can be used. See col. 5, lines 39-64." The Examiner states that it would have been obvious to have formed the particles of Welshimer so that they had a smaller size as taught by Wertz "in order to allow the fertilizer granules of Welshimer to better fertilize and adhere to seeds."

Applicant notes that Welshimer generally discloses a manufactured granular substrate composition suitable for use as a carrier for active chemical agents. These agents are, for examples,

herbicides or pesticides (paragraph [0003]). Welshimer's granular substrate includes one or more mineral components (dolomite, limestone, gypsum), one or more light weight additives (expanded silica, fly ash, hydrated lime, wheat flour, etc.), and a binder (paragraph [0013]). Wertz discloses a slow release nitrogen fertilizer that is a urea-formaldehyde (UF) polymer (column 2, lines 36-37), which apparently releases nitrogen as it decomposes in the ground. The UF polymer is in the form of particles, and these may also be combined with other agriculturally acceptable particulate materials (column 6, line 44).

The rejection is based on the Examiner's statement that it would have been obvious "to have formed the particles of Welshimer so that they had a smaller size as taught by Wertz in order to allow the fertilizer granules of Welshimer to better fertilize and adhere to seeds." In traversing the rejection, Applicant submits that the references cannot, in fact, be combined as the Examiner proposes.

First of all, Wertz only generally states that the "particle size is dictated by the specific application for which the particle is to be used. In some applications, such as when used as a soil additive, the particle size is less critical than when it may be used for example as a seed coating ..." (column 5, lines 40-46). However, Welshimer discloses a carrier for chemical agents such as herbicides and pesticides, and never suggests treating seeds.

Secondly, Welshimer very specifically discloses a "**granular**" substrate, and specifically discloses producing the product as "pellets" (paragraph [0030], etc.). These are generally of size

guide between 75 and 300, that is, 0.75 to 3.0 mm (750 to 3000 μm) (paragraph [0037]). This is **completely inconsistent** with Wertz's disclosure at column 5, lines 54-64:

“Thus, most of UF polymer particles will be smaller than about 150 microns, and a large number of them may be smaller than about 75 microns. While there is virtually no lower limit to the UF polymer particle size for practicing the invention; as a practical matter, most particles will be larger than one micron. Most of the particles, prepared using the procedures and materials noted above, have a particles size in the range of 10 to 80 microns, with a number average particle size between about 25 and 35 microns. A number average particle size of about 30 microns is quite common.”

That is, the disclosure of Welshimer is **inconsistent** with Wertz's UF particles smaller than 150 microns or smaller than 75 microns (column 5, line 55), and is inconsistent with the disclosure of Wertz's particles of 10-80 microns at column 5, line 60, cited by the Examiner. In fact, Welshimer's pellets are at least **five times larger** than Wertz's UF polymer particles (750 μm minimum *versus* 150 μm maximum). The Welshimer and Wertz references clearly **teach away** from each other in the matter of the particle size, and there is no basis in either reference for modifying the particle size in the other.

Thirdly, in general, Welshimer discloses a manufactured granular substrate composition suitable for use as a carrier for active chemical agents, which comprises (a) one or more mineral components, (b) one or more light weight additives, and (c) one or more water soluble binders. Wertz's fertilizer comprises a urea-formaldehyde (UF) polymer. The compositions of the two references are quite different from each other, arguing against any general motivation for any combination of the two references.

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In addition, Welshimer relates to a manufactured granular substrate composition for use as a carrier for active chemical agents while Wertz relates to a slow release nitrogen fertilizer. Thus, the two references are essentially different from each other in the objects of the inventions, and again, there is no general motivation for any combination of the two references.

To summarize, there is no teaching, suggestion or motivation in the references for any combination of the two references, and the references actually teach away from the Examiner's proposed motivation for modification of particle size.

Therefore, claims 1-4, 6, 11 and 13 are not obvious over Welshimer et al. (U.S. Patent Application Publication 2001/0042494) and Wertz et al. (U.S. Patent No. 6,936,681), taken separately or in combination.

Claims 7-9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Welshimer in view of Wertz et al., U.S. Patent No. 6,936,681 as applied to claims above, and further in view of Walker, U.S. Patent No. 6,110,866. (Office action paragraph no. 6)

The rejection of claims 7-9 is respectfully traversed, and reconsideration is requested.

In traversing the rejection, Applicant submits that the rejection, as stated, is based generally on the combination of Welshimer and Wertz as in the above rejection of claims 1-4, 6, 11 and 13 (see Office action, page 4, line 2). Applicant's arguments that the Welshimer and Wertz references cannot be combined, stated in regard to the above rejection, are applicable here.

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Applicant also notes the Examiner's comments in paragraph no. 11 of the Office action, regarding Applicant's previous arguments. The Examiner cites the *KSR Intl. Co. v. Teleflex Inc.* Supreme Court case and cites *Ex parte Smith*, but Applicant submits that the Examiner's arguments based on these cases are vague. The Examiner implies that any arguments based on lack of teaching, suggestion or motivation are no longer usable (see Office action, page 5, at bottom), an interpretation of the *KSR* case that Applicant believes is improper. The Examiner may be stating that it is not sufficient to point to a lack of motivation in the references themselves for a combination, but Applicant's above arguments have also clearly pointed out the general lack of any motivation to combine the Wertz and Welshimer references, and have pointed out inconsistencies in the references that make it impossible to combine them.

Applicant therefore submits that claims 7-9 are not obvious over Welshimer, Wertz et al., and Walker, taken separately or in combination.


If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants' undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

KRATZ, QUINTOS & HANSON, LLP


Daniel A. Geselowitz, Ph.D.
Agent for Applicants
Reg. No. 42,573

DAG/xl

Atty. Docket No. **050050**
Suite 400
1420 K Street, N.W.
Washington, D.C. 20005
(202) 659-2930



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